

CLAIMS

1. Method for gathering flat articles (5) in stacks (9) of one or more articles (5) each, the method comprising the step of conveying the stacks (9) being produced one after the other along a gathering route (1) in a stack conveyance direction and past at least one feed station, each stack lying against a supporting surface (7) of a stack support (2), the method further comprising the steps of supplying articles (5) along a supply route (3) in a feed direction to the feed station, inserting one of the flat articles (5) between each two successive stacks (9) or stack supports (2) respectively and positioning the inserted article on one of the two successive stacks (9) or supporting surfaces (7) of stack supports respectively, wherein the supply direction comprises a component parallel to the stack conveyance direction, and wherein the articles (5) are inserted between two successive stacks (9) or stack supports (2) while being gripped on their leading edges (5.1).
2. Method in accordance with claim 1, characterized in that the stack supports are aligned not parallel to the stack conveyance direction.
3. Method according to claim 1, characterized in that of the stack supports (2) each one comprises a stop ledge (8) at a bottom edge of the supporting surfaces (7), that the articles (5) are inserted between the stacks (9) or the stack supports (2) from above, the gripped edges (5.1) directed downwards and that the articles (5) are released from being held, when the gripped edge (5.1) is positioned immediately above the stop ledge (8).
4. Method in accordance with claim 3, characterized in that the articles (5) are conveyed towards the feed station with their gripped edges (5.1) directed forwards and are positioned on the upstream stack (9) or on the upstream supporting surface

(7) respectively.

- 5 5. Method according to claim 3, characterized in that the articles (5) are conveyed towards the feed station with their gripped edges (5.1) directed backwards and are positioned on the downstream stack (9) or on the downstream supporting surface (7) respectively.

6. Method in accordance with claim 1, characterized in that, during insertion of the articles between the stacks (9) or stack supports (2) respectively, the gripped edges (5.1) are conveyed more rapidly or more slowly in the stack conveyance direction than the stack supports (2).

- 10 7. Method according to claim 6, characterized in that the supporting surfaces (7) are positioned inclined or slanting relative to the gathering route (1) and that during insertion of the articles between the stacks (9) or stack supports (2) respectively the gripped edges (5.1) are conveyed in parallel to this inclination.

- 15 8. Method in accordance with claim 1, characterized in that the articles (5) are conveyed towards the feed station in a suspended manner and are inserted between the stacks (9) or stack supports (2) respectively from below, their gripped edges (5.1) directed upwards.

- 20 9. Method according to claim 1, characterized in that the articles (5) are conveyed towards the feed station with their gripped edge (5.1) oriented towards one side and that the articles are inserted sideways between the stacks (9) or stack supports (2) respectively.

10. Arrangement for gathering flat articles (5), the arrangement comprising a plurality of stack supports (2) and a plurality of holding elements (4), the stack supports (2) comprising a supporting surface (7) each and being conveyed one behind the other in a stack conveyance direction along a gathering route (1) past at least one feed station, the holding elements (4) being equipped for held supply of one flat article (5) each to the feed station and being conveyed one after the other in a supply direction along a supply route (3) towards the gathering route (1) and in the feed station being deactivated for releasing the article (5), wherein the supply direction comprises a component parallel to the stack conveyance direction, wherein the supply route (3) traverses the gathering route (1) at the feed station, wherein conveyance of the stack supports (2) and of the holding elements (4) are matched to one another in such a manner, that at the feed station one holding element (4) is conveyed between every pair of successive stack supports (2), and wherein the device further comprises means for deactivating the holding elements (4) during their conveyance between the stack supports.
11. Arrangement in accordance with claim 10, characterized in that the supporting surfaces (7) are aligned not in parallel with the gathering route (1).
12. Arrangement according to claim 10, characterized in that the stack supports (2) are arranged on at least one first conveying organ (30) and the holding elements (4) on at least one second conveying organ (31), wherein the conveying organs (30, 31) are arranged in planes parallel to one another at least in the area of the feed station.
13. Arrangement in accordance with claim 10, characterized in that the supporting surfaces (7) comprise lower and upper edges aligned transverse to the gathering route (1) and lateral edges aligned inclined relative to the gathering route (1), as well as stop ledges (8) located on the lower edge.

14 Arrangement according to claim 13, characterized in that the supply route (3) traverses the gathering route (1) from above to below and that the means for deactivating the holding elements (4) is arranged in such a manner, that the holding elements (4) are deactivated, when positioned in a lower zone of the stack supports (2).

15 Arrangement in accordance with claim 13, characterized in that the supply route (3) traverses the gathering route (1) from below to above and that the means for deactivating the holding elements (4) are arranged in such a manner, that the holding elements (4) are deactivated, when positioned in an upper zone of the stack supports (2).

16 Arrangement according to claim 15, characterized in that a second stop ledge (8') is provided in the upper zone of each supporting surface.

17 Arrangement in accordance with claim 13, characterized in that the supply route (3) traverses the gathering route (1) from a first side of the stack supports (2) to a second, opposite side and that the means for deactivating the holding elements (4) are arranged in such a manner, that the holding elements (4) are deactivated, when positioned in a zone of the second, opposite side of the stack supports (2).

18 Arrangement according to claim 12, characterized in that the stack supports (2) are arranged laterally on a first conveying organ (30), that the holding elements (4) are arranged laterally on a second conveying organ (31) and that the first and the second conveying organ (30 and 31) are arranged in such a manner, that the holding elements (4) and the stack supports (2) pass in combing manner through one another in the traversing area.

19. Arrangement in accordance with claim 18, characterized in that the stop ledges (8) of the stack supports (2) comprise passages (33) for the holding elements (4).
20. Arrangement according to claim 12, characterized in that each one of the stack supports (2) comprises two stack support parts (2.1, 2.2) arranged at a distanced from one another transverse to the gathering route (1), each one of the two stack support parts being arranged on one of two first conveying organs (30.1 and 30.2), and that the holding elements (4) and the second conveying organ (31) are arranged to pass in the traversing zone between the stack support parts (2.1, 2.2).
21. Arrangement in accordance with claim 12, characterized in that each one of the holding elements (4) comprises two holding element parts (4.1 and 4.2) distanced from each other transverse to the gathering route (1), each holding element part being arranged on one of two second conveying organs (31.1 and 31.2) and that the stack supports (2) and the first conveying organ (30) are arranged between the holding element parts (4.1 and 4.2).
22. Arrangement according to claim 10, characterized in that the stack supports (2) are V-shaped compartments (20) arranged transverse to the gathering route (1) and comprising side walls arranged one behind the other in the stack conveyance direction and a floor joining the side walls, wherein one of the side walls serves as supporting surface (7) and the floor as stop ledge (8), and wherein the other side wall (21) is capable of taking over the function of the next upstream or downstream stack support (2).